

The Basics of Beekeeping

New Beekeepers: Learn the basics of keeping bees and harvesting honey.

by Cherie Langlois

Basic beekeeping doesn't require huge amounts of money, time or space, and it can be done just about any place where flowers bloom. If like to drizzle amber honey on your morning toast or into green tea, you might want to give beekeeping—or apiculture—a try.

Our country could certainly use some new beekeepers. According to Troy Fore, executive director of the American Beekeeping Federation, there are an estimated 100,000 hobby beekeepers in the United States, down from 200,000 in the 1970s.

Urbanization has played a role in this decline, along with the spread of parasitic mites that have decreased production and increased beekeeping costs.

"The possibility of being stung, problems with mites, and the labor involved puts potential beekeepers off," says Jack Robertson, a beekeeper with 25 years experience who keeps 250 hives near Olympia, Wash., with his wife, Virginia.

But small-scale beekeeping doesn't require huge amounts of money, time or space, and it can be done just about any place where flowers bloom, maintains Howland Blackiston, a Connecticut beekeeper with over 20 years of experience and author of *Beekeeping for Dummies*. (Here's a list of beekeeping equipment.)

A few healthy hives will reward you with pounds of surplus honey to savor yourself, bestow on neighbors or sell at your local farmer's market. As they forage in your garden, the bees will also perform the essential job of pollination—the transfer of pollen that allows plants to reproduce.

"I've witnessed the miracle in my own garden: more and bigger flowers, fruits and vegetables," says Blackiston, adding that many gardeners report seeing fewer Honey bees these days.

"Millions of colonies of feral Honey bees have been wiped out by urbanization, pesticides and parasitic mites. Backyard beekeeping has become vital in our efforts to establish lost colonies and offset the natural decrease in pollination by wild bees."

The Hard-Working Honey Bee

The Honey bee, *Apis mellifera*, is an amazing creature and—except for the drones—the ultimate workaholic. A native of Europe, Asia and Africa, this insect lives in a complex, three-caste society composed of thousands of bustling individuals.

Although their lives are fleeting by human standards, queens, workers and drones cooperate to keep the colony going from year to year and form new colonies by swarming.

More about Bees and Beekeeping

Article:

Bees Threatened by Colony Collapse

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Local Honey, Local Food

Books *Beekeeping for Dummies* by Howland Blackiston (Hungry Minds, Inc.)

The Hive and The Honeybee edited by Joe M. Graham (Dadant & Sons, Inc.)

The Beekeeper's Handbook by Diana Sammataro, Alphonse Avitabile, and Roger A. Morse (Cornell University Press)
Workers nurture their egg-laying queen, keep the hive cleaner than our own homes, protect the colony from raiders, and fly

thousands of miles to gather food.

Miraculously, they manage to do all this without cell-phones or e-mail, communicating instead through the emission of chemical substances called pheromones and by performing dances in specific patterns.

Unlike that bad-tempered yellow jacket buzzing around your hamburger, Honey bees are vegetarians that obtain their protein from pollen and their carbohydrates from flower nectar.

After the worker bee industriously gathers these provisions, she hands them off to a younger worker to deposit in hexagonal wax cells. The bees add enzymes to the nectar, then fan this concoction with their wings to evaporate the water, and gradually it turns to thick, sweet honey.

Come winter, the clustering bees will use these food stores to generate heat, contracting their wing muscles to keep the hive a toasty 92 degrees F.

History of Bees and Honey

Primitive societies apparently appreciated the sweetness of honey as much as we modern humans. Cave drawings found in Spain from around the year 6000 B.C. depict human figures scaling a cliff to snatch honey from a wild hive.

Later, ancient peoples of the Middle East, the Mediterranean and Northern Europe learned to exploit the bees' propensity for settling within dark spaces after swarming.

They build hives out of logs, pottery vessels, and straw or wicker containers called keps. Unfortunately for the bees, early beekeepers usually couldn't remove honeycomb unless they killed the colony with burning sulfur or boiling water.

In 1622, the first hives of European Honey bees made the journey from England to the Colony of Virginia. But it wasn't until 1851, when pastor Lorenzo Langstroth of Philadelphia created a wooden hive with movable frames, that beekeepers were able to effectively—and benignly—manage their colonies.

Honey bees soon reached North America's West Coast and colonized most of the rest of the world as well. Today the Langstroth hive is the most commonly used hive around the globe.

Tips for Beekeepers

The very first thing a beginning beekeeper should do is get a good book on the subject, one that's up-to-date and easy to follow," advises Blackiston.

He suggests beginners look for a book with good illustrations and photos (check Amazon online) and surf the web for bee resources. "Join a bee club," he adds. "That's a great way to meet other beekeepers and latch onto a mentor."

Before you officially start keeping bees, however, find out if your community prohibits or restricts beekeeping, or requires registration of your hives. And try following a season through to see what blooms in your area, says Jack Robertson.

Near the Robertsons' home in western Washington, for instance, Honey bees gather nectar and pollen from a variety of sources that include alder, skunk cabbage, scotch broom, camas, dandelion, poppies and blackberries—basically anything that flowers.

"Bees will fly up to three miles for nectar, but the farther away they have to fly the shorter their life span [due to wing damage and predation]," he says.

In choosing a spot for your new apiary, look for a site that receives plenty of sunshine throughout the day (some shade is necessary in hot climates) and has good air circulation and drainage. Picking a secluded area behind a fence or screen of trees will help prevent vandalism and conflicts with bee-wary neighbors.

Workers tend to zoom up as they exit the colony, so if you avoid putting the hive too close to places frequented by children, pets, pedestrians or traffic—and aim the entrance away from these areas—your bees will be unlikely to cause problems. Make sure the bees have access to a nearby natural or artificial water source so they won't make a beeline for your neighbor's leaky water spigot. Honey bees use large amounts of water to regulate temperature and moisture levels in the hive during summer.

Winter is a good time to order your bees and beekeeping paraphernalia so you can get started in the spring. You can

purchase equipment used, new, or even make it yourself, but many experts recommend that beginners opt for new, since second-hand supplies may harbor disease.

Prices vary; expect to spend about \$200 to \$400 on a hive, equipment, tools and medication, Blackiston says. You can order your first package of disease-free bees through a reputable supplier (yes, shipped via UPS or U.S. mail) for around \$50-\$70—one package equals about 11,000 bees.

Keep in mind that Honey bees come in a variety of types and hybrid strains. For beginners, Blackiston favors the popular, productive Italian race, while the Robertsons recommend the mellow Carniolan.

Start with one hive until you get the hang of things, then consider expanding to two during your second year, Blackiston says.

“Recognizing normal and abnormal situations is easier when you have two colonies to compare, and a second hive enables you to borrow frames from a stronger colony to supplement the one that needs a little help.”

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